UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/533,958	05/04/2005	Khaledul M Islam	PAT 58223W-2	8096

26123 7590 03/22/2007

BORDEN LADNER GERVAIS LLP
WORLD EXCHANGE PLAZA
100 QUEEN STREET SUITE 1100
OTTAWA, ON K1P 1J9
CANADA

EXAMINER	
LY, NGHI H	
ART UNIT	**PAPER NUMBER**
2617	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/22/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/533,958	ISLAM ET AL.	
	Examiner	Art Unit	
	Nghi H. Ly	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 January 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *27,28 and 32-59* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *27,28 and 32-34* is/are allowed.

6)☒ Claim(s) *35-59* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 01/04/07 have been fully considered but they are not persuasive.

On page 8 of applicant's remarks, applicant argues that Abreu fails to teach counting a number of times the system channel is lost within a timeout period and at paragraph 31 of the disclosure of the present application: "The timeout period establishes a second condition for entering the deep sleep mode in combination with the first condition. In other words, the deep sleep mode is entered only when the pilot or paging channel is lost at least a minimum number of times within a maximum period of time."

In response, Abreu indeed teaches counting a number of times the system channel is lost within a timeout period (see column 9, lines 26-58, where Abreu teaches "the number of times the received signal strength for the candidate suitable base station has been unacceptable". In order to execute this, it takes time and it reads on "within a timeout period"), and in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., *the timeout period establishes a second condition for entering the deep sleep mode in combination with the first condition* and *the deep sleep mode is entered only when the pilot or paging channel is lost at least a minimum number of times within a maximum period of time*) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the

specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

On page 9 of applicant's remarks, applicant argues that Abreu fails to teach the step of re-entering the deep sleep mode includes switching the mobile device to one of a first, second and third level deep sleep modes and Abreu does not teach a third level deep sleep modes.

In response, Abreu does indeed teach the step of re-entering the deep sleep mode includes switching the mobile device to one of a first, second and third level deep sleep modes (see column 8, lines 31-47, where Abreu teaches the handset re-enter a sleep mode and in reads on applicant's "**one** of a first, second and third level deep sleep modes"). Since claim 36 recites "one of", Abreu is not required to respond to a third level deep sleep modes.

On page 9 of applicant's remarks, applicant further argues that Abreu does not specify scan should be carry out by "a low power controller".

In response, Abreu does indeed teach a low power controller (see column 8, lines 30-48, where Abreu teaches the handset enters a sleep mode for a given time period).

On pages 10 and 11 of applicant's remarks, applicant further argues that Sklovsky does not teach the use of a third level of sleep mode.

In response, Sklovsky does indeed teach the use of a third level of sleep mode (see [0029], where Sklovsky "the time interval and/or battery capacity the switches he

device in to or out of power saving mode", in this case, the time interval reads applicant's "a third level of sleep mode").

On page 11 of applicant's remarks, applicant further argues that the combination of Abreu and Sasaki fails to teach the limitations of claim 45.

In response, the combination of Abreu and Sasaki does indeed teach the all of the limitation of claim 45.

On page 11 of applicant's remarks, applicant further argues that there is no motivation to combine the references.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the motivation to do so found in the references themselves so that discomfort is avoid in hearing the reproduced voice (see Sasaki, Abstract).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 35-41, 44 and 52-59 are rejected under 35 U.S.C. 102(b) as being anticipated by Abreu et al (US 5,754,956).

Regarding claim 35, Abreu teaches a method for saving battery power in a mobile device switched to a deep sleep mode (see column 4, line 57 to column 5, line 5), the method comprising:

a) monitoring a system channel (see column 8, lines 31-47),

b) counting a number of times the system channel is lost within a timeout period (see column 9, lines 26-58),

c) entering the deep sleep mode when the system channel count equals a predetermined number (also see column 8, lines 31-47, see "then the handset 120 enters a sleep mode for a given time period"),

d) waking up from the deep sleep mode after a time interval to sample an RF strength of a system (also see column 8, lines 31-47, see "When the sleep time ends, the handset 120 will again scan..."),

e) comparing the sampled RF condition strength to a predetermined level (also see column 8, lines 31-47, see "predetermined threshold"),

f) increasing the time interval if the sampled RF condition strength is less than the predetermined level (also see column 8, lines 31-47, see "After repeated unsuccessful scans, the sleep time will change to a longer duration". In this case, Abreu's "unsuccessful scans" reads on Applicant's "the sampled RF condition strength

is less than the predetermined level", since "unsuccessful scans" based on "signal strength of suitable base station" as indicated in column 8, lines 3-4), and,

g) re-entering the deep sleep mode (also see column 8, lines 31-47).

Regarding claim 36, Abreu teaches the step of re-entering the deep sleep mode includes switching the mobile device to one of a first, second and third level deep sleep modes (see column 8, lines 31-47).

Regarding claim 37, Abreu teaches switching includes setting a maximum loop counter value to a predetermined counter value associated with one of the first, second and third level deep sleep modes (see column 11, lines 15-20 and column 11, lines 45-50).

Regarding claim 38, Abreu teaches the step of switching includes setting the time interval to a predetermined time value associated with one of the first, second and third level deep sleep modes (see column 8, lines 31-47, see "a sleep mode for a given time period").

Regarding claim 39, Abreu teaches the predetermined time value associated with the second level deep sleep mode is greater than the predetermined time value associated with the first level deep sleep mode (see column 8, lines 31-47, see "the sleep time will change to a longer duration").

Regarding claim 40, Abreu teaches the predetermined time value associated with the third level deep sleep mode is greater than the predetermined time value associated with the second level deep sleep mode (see column 8, lines 31-47, see "the sleep time will change to a longer duration").

Regarding claim 41, Abreu teaches the step of waking includes determining a system for acquisition from a list of systems associated with one of the first, second and third level deep sleep modes (see column 8, lines 31-47).

Regarding claim 44, Aabreu teaches the step of comparing includes comparing the signal to noise ratio of the RF condition to a predetermined value (see column 3, lines 35-38).

Regarding claim 52, Abreu teaches the step of switching includes setting a maximum timeout period to a predetermined timeout value associated with one of the first, second and third level deep sleep modes (see column 8, lines 31-47).

Regarding claim 53, Abreu teaches comparing includes switching the mobile device to one of the second and third level deep sleep modes when the maximum timeout period expires (see column 8, lines 31-47).

Regarding claim 54, Abreu teaches the step of switching the mobile device to one of the second and third level deep sleep modes includes switching the mobile device to the second level sleep mode when the mobile device is in the first level deep sleep mode (see column 8, lines 31-47).

Regarding claim 55, Abreu teaches the step of switching the mobile device to one of the second and third level deep sleep modes includes switching the mobile device to the third level deep sleep mode when the mobile device is in the second level deep sleep mode (see column 8, lines 31-47).

Regarding claim 56, Aabreu teaches a mobile device battery power saving system (see column 4, line 57 to column 5, line 5),

a) a channel processor for providing a flag signal indicating loss of a system channel (see fig.2, processor 128 and see column 8, lines 31-47);

b) a deep sleep controller for receiving the flag signal (see column 9, lines 26-58 and column 11, lines 16-21), counting a number of times the system channel is lost within a timeout period (see column 8, lines 31-47), and providing a system lost exit flag for entering a deep sleep mode when the system channel count equals a predetermined number (see column 8, lines 31-47 and column 9, lines 26-58),

c) a variable setting controller for setting deep sleep mode variables in response to the system lost exit flag and for adjusting the deep sleep mode variables in response to control signals (see fig.2, processor 128 and see column 8, lines 31-47), and,

d) a low power controller for iteratively sampling an RF condition parameter at a time interval defined by the deep sleep mode variables and for providing the control signals to the variable setting controller when the RF condition fails to improve (see column 8, lines 31-47 and Abstract, see "control signal").

Regarding claim 57, Aabreu teaches the system channel includes one of a pilot channel and a paging channel (see Abstract, see "control channel").

Regarding claim 58, Aabreu teaches the deep sleep mode variables include a timer value for setting the time interval and a loop count value for setting a number of iterations (see column 8, lines 31-47 and see column 9, lines 26-58).

Regarding claim 59, Aabreu teaches the RF condition parameter includes a signal to noise strength ratio (see column 3, lines 35-38).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 42 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abreu et al (US 5,754,956) in view of Sklovsky (US 2004/0041538A1).

Regarding claim 42, Abreu teaches claims 37 and 41. Abreu does not specifically disclose the list of systems includes a first system list, a second system list and a third system list associated with the first, second and third level sleep modes respectively.

Sklovsky teaches the list of systems includes a first system list, a second system list and a third system list associated with the first, second and third level sleep modes respectively (see [0029]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Sklovsky into the system of Abreu in order to prevent problem that can occur when power becomes exhausted in a portable device (see Sklovsky, Abstract).

Regarding claim 43, Abreu teaches claims 37 and 41. Abreu does not specifically disclose the first system list is a subset of the second system list and the third system list, and the second system list is a subset of the third system list.

Sklovsky teaches the first system list is a subset of the second system list and the third system list, and the second system list is a subset of the third system list (see [0029]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Sklovsky into the system of Abreu in order to prevent problem that can occur when power becomes exhausted in a portable device (see Sklovsky, Abstract).

7. Claims 45-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abreu et al (US 5,754,956) in view of Sasaki et al (US 5,539,858).

Regarding claims 45-48, Abreu teaches claim 37. Abreu does not specifically disclose the step of comparing includes setting a mobility flag to true if a Pseudo Noise of the system is unknown.

Sasaki teaches the step of comparing includes setting a mobility flag to true if a Pseudo Noise of the system is unknown (see column 7, lines 28-43).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Sassaki into the system of Abreu so that discomfort is avoid in hearing the reproduced voice (see Sasaki, Abstract).

Regarding claim 49, Abreu teaches the step of comparing includes

(i) incrementing a loop counter when the mobility flag is false (see column 8, lines 31-47 and column 9, lines 26-58),

(ii) comparing the loop counter value to the maximum loop counter value (see column 8, lines 31-47 and column 9, lines 26-58), and,

(iii) switching the mobile device to one of the second and third level deep sleep when the loop counter value equals the maximum loop counter value (see column 8, lines 31-47 and column 9, lines 26-58).

Regarding claim 50, Abreu teaches step (iii) includes switching the mobile device to the second level deep sleep mode when the mobile device is in the first level deep sleep mode (see column 8, lines 31-47).

Regarding claim 51, Abreu teaches step (iii) includes switching the mobile device to the third level deep sleep mode when the mobile device is in the second level deep sleep mode (see column 8, lines 31-47).

Allowable Subject Matter

8. Claims 27, 28 and 32-34 are allowed for the reasons as stated in the previous Office Action (dated 04/21/06).

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nghi H. Ly whose telephone number is (571) 272-7911. The examiner can normally be reached on 8:30 am-5:30 pm Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Appiah can be reached on (571) 272-7904. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nghi H. Ly